

REMARKS

Claims 1-3, 7-10, 12-21, 45, 46, 50, 52-66, and 101-103 are pending in this application. Claims 4-6, 11, 47-49, and 51 have been canceled and claims 22-44 and 67-100 have been withdrawn.

In the Office Action dated March 25, 2005, the Examiner objected to the Abstract of the Disclosure. In addition, the Examiner rejected claims 1-3, 7-10, 12-21, 45, 46, 50, 52-66, and 101-103. In particular, claims 101-102 were rejected under 35 U.S.C. § 112 ¶ 1 as failing to comply with the written description requirement. The Examiner also rejected claims 1-3, 7-8, 12, 14-21, 45-46, 50, 52, 57-66 and 103 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,638,466 B1 ("Abbott") in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2. In addition, claims 9-10, 13, 53-55, and 101-102 were rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2 and U.S. Patent No. 6,692,681 B1 (Lunde). The Examiner also rejected claims 9 and 53 under 35 U.S.C. § 103(a) as being unpatentable over Abbott in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2 and U.S. Patent No. 5,023,041 ("Jones et al."). Finally, claims 54-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Abbott in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2, Jones et al., and Lunde.

Applicants would like to thank the Examiner for conducting an interview to discuss the pending claims on July 27, 2005, as summarized in the Interview Summary issued on that date.

As indicated above, Applicants have amended the Abstract and claims 1, 45, and 101. Applicants respectfully request that in light of this amendment and the remarks below that the Examiner withdraw the objection to the Abstract and the rejection of claims 1-3, 7-10, 12-21, 45, 46, 50, 52-66, and 101-103 and allow those claims to proceed to issue.

Objection to Abstract

Applicants have amended the Abstract to remove phrases that can be implied as suggested by the Examiner. Therefore, Applicants respectfully request that this objection be withdrawn.

Rejection of Claims 101-102 under § 112 ¶ 1

The Examiner rejected claims 101-102 as failing to comply with the written description requirement. In rejecting these claims, the Examiner asserted that the limitation of “altering the shape of the first tool such that the interior surface of the first tool aligns with exterior surface of the second tool” did not have support in the original disclosure. As discussed during the interview, the specification, however, expressly discloses this step. Specifically, the specification states that:

“the tooling elements may be designed to prevent . . . fiber washout through precise geometric controls. For example, by designing the tool to precisely align with the internal mold elements, and the fibers, the shifting of the fibers from resin infusion is reduced.”

(Specification at ¶ 110). Therefore, since the specification expressly supports this limitation of claim 101 and 102, Applicants respectfully request that this objection be withdrawn.

In addition, as suggested by the Examiner during the interview, Applicants have amended claim 101 to clarify that the shape of the first tool does not change during the molding process to reduce fiber modification. Rather, the first and second tool are initially constructed in such a shape so as to align and reduce fiber modification. This amendment is not intended to change the scope of the claim in any way.

**Rejection of Claims 1-3, 7-8, 12, 14-21, 45, 46, 50, 52, 57-66, and 103
Under § 103(a) Over Abbott in view of EP 0 786 330 A2 and EP 1 005 978 A2**

To establish a *prima facie* case of obviousness under § 103(a), the MPEP requires that the Examiner demonstrate (1) some suggestion or motivation to modify the reference or combine reference teachings; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all the claim limitations. MPEP § 2142 (8th Ed., revised May 2004). Because Abbott, EP 0 786 330 A2, and EP 1 005 978 A2 at least do not teach or suggest the now-amended limitation of “applying a support layer comprising a fibrous material on at least one of the first side and the second side of the core section” of claims 1-3, 7-8, 12, 14-21, 45, 46, 50, 52, 57-66, and 103, Applicants respectfully request that the Examiner withdraw this rejection.

As explained during the interview, the method of the subject claims includes “applying a thermoplastic barrier layer” to the core to seal it and prevent resin intrusion. (Specification at ¶ 77.) In addition, even if the core is sealed, the pressure caused by the introduction of resin into the mold containing the core can cause the core to deform. Therefore, the method of the subject claims, as amended, also includes “applying a support layer comprising a fibrous material on at least one of the first side and the second side of the core section.”

As recognized by the Examiner neither Abbott nor EP 0 786 330 A2 disclose “applying a support layer on at least one of the first side and the second side of the core section.” Yet, in the Final Office Action, the Examiner does argue that EP 1 005 978 A2 discloses a support layer, namely that thermosetting resin film 3a serves as such a support layer. (Final Office Action at 5.) However, as discussed during the interview, the Examiner based this statement on his opinion that a layer of any material would provide “support.” Thus, in the Examiner’s opinion, while any support provided by resin film 3a would be trivial at best, it would still provide some “support” and thus constitute a “support layer.” Nonetheless, the Examiner did agree that a support layer comprising a fibrous material as disclosed by Applicants was not disclosed by EP 1 005 978 A2.

As explained during the interview, Applicants disagree with the Examiner that a “support layer” includes a layer of any material, even if that material provides a only trivial amount of support. In order to resolve this disagreement, and as suggested by the Examiner, Applicants have amended this claim limitation to indicate that the support layer comprises a fibrous material. In light of this amendment, the Examiner agreed that EP 1 005 978 A2 also does not disclose this limitation.

Thus, since these references cited by the Examiner do not teach at least the element of “applying a support layer comprising a fibrous material on at least one of the first side and the second side of the core section” the rejections of claims 1-3, 7-8, 12, 14-21, 45, 46, 50, 52, 57-66, and 103 should be withdrawn.

Rejection of Claims 9-10, 13, 53-55, and 101-102 under § 103(a)

Applicants also respectfully assert that claims 9-10, 13, 53-55, and 101-102 are not obvious over Abbott in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2 and Lunde. Specifically, none of these references discuss “applying a support layer comprising a fibrous material,” as recited in the subject claims. As discussed above, and as the Examiner acknowledged during the interview, this element is absent from Abbott, EP 0 786 330 A2, and EP 1 005 978 A2. Lunde does mention the use of honeycomb core in a sandwich composite structure, but does not teach or suggest sealing the core let alone applying a support layer between the core and an adhesive layer, wherein the support layer comprises a fibrous material. (Col. 6-7). Therefore, because the Examiner cannot show that these references teach all the elements of these claims (as acknowledged by the Examiner at the Interview), Applicants respectfully request that the Examiner withdraw these rejections.

Rejection of Claims 9 and 53 under § 103(a)

Applicants also believe that the § 103(a) rejection of claims 9 and 53 over Abbott in view of EP 0 786 330 A2 and in further view of EP 1 005 978 A2 and Jones et al is improper. Specifically, a *prima facie* case of obvious has not been demonstrated because none of the cited references teaches or suggests the claim limitation of applying a support layer comprising a fibrous material. As discussed above, Abbott, EP 0 786 330 A2, EP 1 005 978 A2 do not teach or suggest the application of a support layer, and the Examiner acknowledged that fact at the interview. Jones et al. also does not disclose this limitation. Moreover, the Examiner has not pointed to any subject matter in Jones et al. for any alleged teaching of a support layer, and moreover, Jones

et al. does not even teach the use of core in forming a composite structure. Therefore, because the Examiner cannot show that these references teach all the elements of these claims (as acknowledged by the Examiner at the Interview), Applicants respectfully request that this rejection be withdrawn.

Rejection of Claims 54-56 under § 103(a)

For the reasons discussed above, Applicants also respectfully assert that claims 54-56 are not obvious. Specifically, none of the references cited by the Examiner to reject these claims (Abbott, EP 0 786 330 A2, of EP 1 005 978 A2, Jones et al., and Lunde) teach or suggest applying a support layer comprising fibrous material. Therefore, because the Examiner cannot show that these references teach all the elements of these claims (as acknowledged by the Examiner at the Interview), Applicants respectfully request that this rejection be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: _____



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